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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/134,147	08/14/1998	WALLACE T.Y. TANG	50169/110	7613

32588 7590 02/24/2003

APPLIED MATERIALS, INC.  
2881 SCOTT BLVD. M/S 2061  
SANTA CLARA, CA 95050

EXAMINER

MACARTHUR, SYLVIA

ART UNIT	PAPER NUMBER
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1763

13

DATE MAILED: 02/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/134,147

Applicant(s)

TANG, WALLACE T.Y.

Examiner

Sylvia R MacArthur

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Double Patenting***

1. Claims 11-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 and 33-36 of copending Application No. 09/909,766. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The present application claims a CMP apparatus comprising a light source, a photodetector connected to an interferometer, and a window embedded with the polishing table. Likewise the present invention claims a platen, chuck, motor, and an endpoint detector with a laser and hole filled with a fiber optic cable.

Likewise the co-pending application claims a platen, chuck, motor, and an endpoint detector with a laser and hole filled with a fiber optic cable. The endpoint apparatus comprises a laser interferometer where the change in the reflected signal is analyzed and is correlated to a change in film thickness.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 11-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Canon (JP 3-234467).

Canon teaches a polishing unit (polisher). A measurement light 3d(light source) passes through the window glass 4 and irradiates the surface 2a to be measured.

The sensor 3a (photodetector) is connected to a calculation element 3b in the optical displacement measurement device 3 (interferometer). Note the optical displacement measurement device notes the change in reflected light using interferometry. A control unit 8 (analyzer) is used to set a polishing dimension (the thickness of the film, see page 5 of the English translation).

This reads on a device that monitors a dimensional change based on the reflected light signal. Stamper 1 is the substrate to be polished.

The apparatus is capable of operating so that the monitored section is minimized to remove signal problems.

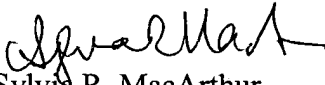
4. Claims 11-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kogyo (JP 2-222533) teaches a photoreceptor 7 (spectrometer) that receives the reflected light (inherently a light source exists) and a light detector 9(photodetector) that detects the amount of reflected light (monitors the dimensional change) from the surface of the semiconductor wafer W. A semiconductor W is polished by a grindstone 3 (polisher). Figure 1 illustrates that the device is positioned on the same side of the substrate as the light source. Kogyo also teaches a light emitting element 6 irradiated a surface of the wafer W. Note a small section is illuminated at a time. Figure 1 illustrates that more than one section is illuminated.

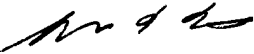
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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R MacArthur whose telephone number is 703-306-5690. The examiner can normally be reached on M-F during the core hours of 8 a.m. and 2 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone number is (703) 872-9630.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Sylvia R. MacArthur  
February 19, 2003

  
BENJAMIN L. UTECH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700